

<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED / ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER <b>P60998US0</b>
		US APPLICATION NO. (If known, use 7 CFR 1.1) <b>09/868908</b>
INTERNATIONAL APPLICATION NO. <b>PCT/US97/09742</b>	INTERNATIONAL FILING DATE <b>4 June 1997</b>	PRIORITY DATE CLAIMED <b>4 June 1997</b>
TITLE OF INVENTION <b>AIR CUSHION</b>		
APPLICANT(S) FOR DO/EO/US <b>HUANG, Ing-Jing</b>		

**Applicant herein submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information.**

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for Internatl. Preliminary Examination was made by the 19th month from earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☒ has been transmitted by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the Internatl. Preliminary Examination report under PCT Article 36 (35 U.S.C. 371(c)(5)).

**Items 11. to 16. below concern other document(s) or information included:**

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A FIRST preliminary amendment.  
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

**Petition for Revival of an Application for Patent Abandoned Unintentionally  
Under 37 CFR 1.137(b)**

International Search Report – USPTO

PCT/IB/301 Form

PCT/IB/308 Form

First Page of Publication

International Preliminary Examination Report – with Annexes

US APPLICATION NO. (If known, see 37 CFR 1.51) <div style="font-size: 2em; font-weight: bold; text-align: center;">09/868908</div>		INTERNATIONAL APPLICATION NO. <div style="text-align: center; font-weight: bold;">PCT/US97/09742</div>		ATTORNEY'S DOCKET NUMBER <div style="text-align: center; font-weight: bold;">P60998US0</div>					
17. <input checked="" type="checkbox"/> The following fees are submitted:  <b>Basic National Fee (37 CFR 1.492(a)(1)-(5)):</b> Internatl. prelim. examination fee paid to USPTO (37 CFR 1.492 (a) (1)) . . \$690.00 No international preliminary examination fee paid to USPTO (37 CFR 1.492 (a) (2)) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) . . \$710.00 Neither international preliminary examination fee (37 CFR 1.492 (a) (3)) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO) . . . . . <b>\$1000.00</b> International preliminary examination fee paid to USPTO (37 CFR 1.492 (a) (4)) and all claims satisfied provisions of PCT Article 33(2)-(4) . . . . . \$100.00 Search Report prepared by the EPO or JPO (37 CFR 1.492 (a) (5)) . . . . . <b>\$860.00</b>  <div style="text-align: right;"><b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b></div>				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:50%;">CALCULATIONS</th> <th style="width:50%;">PTO USE ONLY</th> </tr> <tr> <td style="text-align: right;">\$ 100.00</td> <td></td> </tr> </table>		CALCULATIONS	PTO USE ONLY	\$ 100.00	
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Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">\$</td> <td style="width:50%;"></td> </tr> </table>		\$			
\$									
<b>Claims</b>	<b>Number Filed</b>	<b>Number Extra</b>	<b>Rate</b>						
Total Claims	45 - 20 =	-25-	x \$18.00	\$ 450.00					
Independent Claims	3 - 3 =	-0-	x \$80.00	\$					
Multiple Dependent Claim(s) (if applicable)			+ \$270.00	\$					
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 550.00					
Reduction by 1/2 for filing by <b>small entity</b> , if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">\$</td> <td style="width:50%;"></td> </tr> </table>		\$			
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<b>SUBTOTAL =</b>				\$ 550.00					
Processing fee of \$130 for furnishing the <b>English translation</b> later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f))				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">\$</td> <td style="width:50%;"></td> </tr> </table>		\$			
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<b>TOTAL NATIONAL FEE =</b>				\$ 550.00					
Fee of \$40.00 for recording the enclosed <b>assignment</b> (37 CFR 1.21(h)). Assignment must be accompanied by appropriate cover sheet (37 CFR 3.28, 3.31).				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">\$</td> <td style="width:50%;"></td> </tr> </table>		\$			
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<b>TOTAL FEES ENCLOSED =</b>				\$ 550.00					
				Amt. to be refunded:	\$				
				Amt. charged:	\$				

a. ☐ A check in the amount of \$ \_\_\_\_\_.00 to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 06-1358 in the amount of \$ 550.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge my account any additional fees set forth in §1.492 during the pendency of this application, or credit any overpayment to Deposit Account No. 06-1358. A duplicate copy of this sheet is enclosed.

**SEND ALL CORRESPONDENCE TO:**

**JACOBSON HOLMAN PLLC**  
 400 7th Street, N.W., Suite 600  
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JPH&S 3/95

AIR CUSHIONBackground of the Invention

Common sportswear such as sneakers, protective pads, helmets, etc, have used  
5 traditional sponge, foam rubber, or polymer compositions as shock-absorbing materials.  
Air inflated cushions have gradually been taking the place of these traditional materials,  
utilizing gas or liquid contained in an air cushion for absorbing shocks.

An air cushion is generally made of two sheets placed one on the other and sealed  
tightly at outer circumferential edges to form a hollow interior inflated with a gas or a  
10 liquid. Another kind of air cushion is made by means of an injection molding process to  
produce a three dimensional air cushion with a hollow interior and then inflating air  
chambers provided therein with a gas or a liquid.

A cushion as shown in Figure 1 is made of two sheets placed one on the other and  
fused together to have an upper flat surface. When a shock is imparted to its surface, it  
15 is received on a spot of the cushion and then dispersed gradually to other surfaces. This  
kind of cushion absorbs only a little shock, and therefore required for energy dispersion  
is comparatively large. In addition, its center of gravity is high so that instability  
produced by shock is accordingly increased.

As can be understood from the stabilizing principles of physics, a cushion with a  
20 flat surface can barely support an exterior high force. Such a cushion can only have a  
shock-absorbing function for an object the cushion is protecting.

A hollow three dimensional cushion as shown in Figure 2, made by means of an  
injection molding process, may have a curved upper surface for contacting an object  
protected by it, but the cushion does not have a structure of shape memorization, and has  
25 to rely on an exterior layer added on its surface to form its upper curved surface. The  
whole curved surface of the cushion is nearly under the lower surface of the object  
protected, i.e. a shocking surface so that when a shock or a pressure is added to the  
surface of the cushion by the object, the shock or pressure force cannot be dispersed to  
two sides, as the cushion is provided with no higher side walls than the height of the

cushion. Therefore a shock energy it receives is only temporarily converted into a side effect, limited in absorbing and stabilizing shock, which is not an ideal structure for a cushion.

5     Summary of the Invention

The main purpose of the invention is to offer an air cushion with a better structure for shock-absorbing and stability.

A three dimensional air cushion according to the invention is shown in Figure 3, intended to have the following advantages.

10     1. Comparatively higher sides, two or three of which are provided with air chambers extending from a center portion so that the air cushion and an object it protects may contact with a curved surface so that dispersion of a surface receiving shock may be increased to minimize moving shock energy, and to maximize a compressible area, and consequently to obtain the largest shock-absorbing effect.

15     2. It can sufficiently convert shock energy added on an intermediate upper surface into outer side support energy.

3. When shock or pressure disappears, the side support energy can completely return to the point of the shock, forming a rebound energy producing an excellent rebounding effect.

20     The buffer-functioning and shock-absorbing effect of air cushions according to the invention has been tested by SATRA FOOTWEAR TECHNOLOGY CENTER in England, and proved to be so far the best structural design for practical use.

Brief Description of the Drawings

25     This invention will be better understood by referring to the accompanying drawings, wherein:

Figure 1 is a side cross-sectional view of a conventional air cushion with an upper flat surface as in the present invention;

Figure 2 is a side cross-sectional view of a conventional air cushion with an upper

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curved-down surface as in the present invention;

Figure 3 is a side cross-sectional view of an air cushion of the present invention;

Figure 4 is a perspective view of a first preferred embodiment of an air cushion of the present invention;

5 Figure 4a is an alternate embodiment of the first preferred embodiment of an air cushion of the present invention;

Figure 5 is a cross-sectional view taken along line I-I in Figure 4a;

Figure 6 is a cross-sectional view taken along line II-II in Figure 5;

10 Figure 7 is a cross-sectional view of a second preferred embodiment of an air cushion of the present invention;

Figure 8 is a cross-sectional view taken along line III-III in Figure 7;

Figure 9 is a cross-sectional view of a third preferred embodiment of an air cushion of the present invention;

15 Figure 10 is a perspective view of a fourth preferred embodiment of an air cushion of the present invention;

Figure 11 is a cross-sectional view taken along line IV-IV in Figure 10;

Figure 12 is a perspective view of a fifth preferred embodiment of an air cushion of the present invention;

Figure 13 is a cross-sectional view taken along line V-V in Figure 12;

20 Figure 14 is a cross-sectional view of a sixth preferred embodiment of an air cushion of the present invention;

Figure 15 is a cross-sectional view of a seventh preferred embodiment of an air cushion of the present invention;

25 Figure 16 is a cross-sectional view of various air cushions of the invention practically utilized in a sneaker;

Figure 17 is a perspective view of a eighth preferred embodiment of an air cushion of the present invention;

Figure 18 is a perspective view of a ninth preferred embodiment of an air cushion of the present invention; and

Figure 19 is a perspective view of a tenth preferred embodiment of an air cushion of the present invention;

#### Detailed Description of the Preferred Embodiments

5 A three dimensional air cushion of the present invention can be formed as a heel air cushion as shown in Figure 4, a foot bottom air cushion as shown in Figure 10 or a shoe sole air cushion as shown in Figure 12, not limited in its shape, and adaptable to sneakers, protective pads, helmets, etc.

10 A first preferred embodiment of a three dimensional air cushion of the present invention, as shown in Figures 4, 4a, 5 and 6, includes one or more independent air chambers 10 or communicated air chambers 10 with passageways 11. Every air chamber 10 can extend to two opposite sides of the cushion body 1, forming a three dimensional inner upper surface and a lower flat smooth curved surface not protruding into the air chambers 10. The sealed peripheral edge of the cushion body 1 can be of a geometric shape. The hollow interior surrounded by the sealed peripheral edge has a projected surface area smaller than the upper surface area of the cushion body 1. The cushion body 1 is of a curved shape occupying a three dimensional space, adaptable to be inwardly recessed or having swollen curved cushions.

15 A second preferred embodiment of an air cushion of the present invention, as shown in Figures 7 and 8, includes a cushion body 1, one or more air chambers as the first preferred embodiment, with one or more recessed elongated grooves 12 provided in a lower surface so as to form a three dimensional recessed surface, and the upper surface is formed flat and smooth with a curvature.

20 A third preferred embodiment of an air cushion of the present invention, as shown in Figure 9, is formed almost the same as the second preferred embodiment, but with one or more elongated grooves 12 formed both on the upper surface and the lower surface.

25 A fourth preferred embodiment of an air cushion of the present invention, as shown in Figure 10 and 11, includes a cushion body 1, formed to support a foot bottom, having elongated grooves 12 formed in an upper surface or in a lower surface as shown

in Figure 8, or in both the upper and the lower surface as shown in Figure 9. As this foot bottom air cushion is to be fixed in an intermediate portion of a sneaker, the two opposite sides are curved upwardly in a preset angle, different from the three dimensionally curved inward or swollen air cushion described above. The special feature of this air cushion is that the inner surface area is smaller than the outer surface area, and each elongated groove 12 of each air chamber 10 has two ends with a projected line extending nearly vertically to the projected elevational surface of the groove.

A fifth preferred embodiment of an air cushion of the present invention, as shown in Figures 12 and 13 includes an air cushion for use in a toe region of a foot bottom.

A sixth preferred embodiment of an air cushion of the present invention, as shown in Figure 14, includes an outer layer 2 of a different material from the cushion body 1 added on the cushion body 1 of the first preferred embodiment, but also adaptable to other air cushions.

A seventh preferred embodiment of an air cushion of the present invention, as shown in Figure 15 includes an outer layer 2 of a different material from the cushion body 1 added on the cushion body of the third preferred embodiment shown in Figure 9.

The air chambers 10 provided in a cushion body 1 of the various preferred embodiments can be filled with a gas, or a liquid, as the air cushion 1 itself is a hollow sealed body. In addition, a one-way air valve and pump device may be attached with the air cushion body 1 for filling its interior with a needed pressure with a gas or a liquid.

An eighth, ninth and tenth preferred embodiment of an air cushion of the present invention, as shown in Figure 17-19, includes a fluid inlet 15, including a valve 13 (as shown in Figure 17) or two valves 13 (as shown in Figure 18) located on opposite sides of a pump device 14.

Figure 16 shows the three air cushions shown in Figures 4, 10 and 12, adapted to be used on a sneaker. The air cushions can be used without or with an outer layer added, with a wide variation of details. Besides, recessed grooves in an upper surface and/or a lower surface can be made independent or connected with each other.

Referring to Figure 3, the air chambers 10 of the air cushion 1 extend to two

curved-up opposite sides, having a curved surface contacting an object protected by it, increasing the dispersing shock-bearing surface to produce a minimum moving of shock energy and comparatively large compressible dimensions to produce maximum shock-absorbing effect. When the air cushion 1 receives a downward shock, the shock pressure will disperse to the two higher sides so that the two opposite higher sides receive larger pressure to produce a clamping effect against the object or the shock source. Then the object, for example a foot, will be moved to the center of the air cushion. In other words, the air cushion can automatically clamp the object or the shock source towards its center and consequently obtain the largest stability. If the shock disappears, the dispersed pressure to the two sides will move back to the location of the shock, forming a rebounding force, and thus giving the air cushion an excellent shock-absorbing function.

While the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications which may fall within the spirit and scope of the invention.

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CLAIMS

WHAT IS CLAIMED IS:

1. (Amended) A three dimensional air cushion comprising:  
at least one air chamber having a sealed peripheral edge, said at least one air chamber including a base portion and two opposed lateral sides located on opposite sides of the base portion to form a concave structure, the base portion and the two lateral sides being formed between an upper surface layer and a lower surface layer, said two opposed lateral sides projecting above a plane occupied by said base portion to form elevated sidewalls of the air cushion and forming a U-shape with the base portion for distributing shock forces delivered to the sidewalls.

2. (Amended) A three dimensional air cushion comprising:  
at least one air chamber having a sealed peripheral edge, said at least one air chamber including a base portion and two opposed substantially vertical lateral sides located on opposite sides of the base portion to form a concave structure, the base portion and the two lateral sides being formed between an upper surface layer and a lower surface layer, said two opposed lateral sides projecting above a plane occupied by said base portion to form elevated sidewalls of the air cushion and forming a U-shape with the base portion for distributing shock forces delivered to the sidewalls, and

an inner surface area of said air cushion defined by said upper surface layer being smaller than an outer surface area of said air cushion defined by said lower surface layer.

3. (Amended) A three dimensional air cushion comprising:  
at least two air chambers communicating with each other, said at least two air chambers including a base portion and two opposed substantially vertical lateral sides located on opposite sides of the base portion to form a concave structure, the base portion and the two lateral sides being formed between an upper surface layer and a lower surface layer, said two opposed lateral sides projecting above a plane occupied by said

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base portion to form elevated sidewalls of the air cushion and forming a U-shape with the base portion for distributing shock forces delivered to the sidewalls, and

at least one recess extending from at least either said upper surface layer or said lower surface layer and separating said air chambers.

4. (Canceled)

5. (Canceled)

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6. (Canceled)

7. The three dimensional air cushion as claimed in claim 1, wherein said at least one air chamber is sealed.

8. The three dimensional air cushion as claimed in claim 2, wherein said at least one air chamber is sealed.

9. The three dimensional air cushion as claimed in claim 3, wherein said at least two air chambers are sealed.

10. The three dimensional air cushion as claimed in claim 1, wherein said air chamber has a one-way valve to communicate with open air.

11. The three dimensional air cushion as claimed in claim 2, wherein said air chamber has a one-way valve to communicate with open air.

12. The three dimensional air cushion as claimed in claim 3, wherein said air chambers have a one-way valve to communicate with open air.

13. (Amended) The three dimensional air cushion as claimed in claim 1, wherein the upper surface layer is provided with at least one recessed elongated groove and the lower surface layer is flat and smooth.

14. (Amended) The three dimensional air cushion as claimed in claim 2, where the upper

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surface layer is provided with at least one recessed elongated groove and the lower surface layer is flat and smooth.

15. (Amended) The three dimensional air cushion as claimed in claim 3, wherein the at least one recess is at least one recessed elongated groove in the upper surface layer and the lower surface layer is flat and smooth.

16. (Amended) The three dimensional air cushion as claimed in claim 1, wherein the lower surface layer is provided with at least one recessed elongated groove, and the upper surface layer is flat and smooth.

17. (Amended) The three dimensional air cushion as claimed in claim 2, wherein the lower surface layer is provided with at least one recessed elongated groove, and the upper surface layer is flat and smooth.

18. (Amended) The three dimensional air cushion as claimed in claim 3, wherein the at least one recess is at least one recessed elongated groove in the lower surface layer and the upper surface is flat and smooth.

19. (Amended) The three dimensional air cushion as claimed in claim 1, wherein the upper surface layer and the lower surface layer are provided with at least one recessed elongated groove.

20. (Amended) The three dimensional air cushion as claimed in claim 2, wherein the upper surface layer and the lower surface layer are provided with at least one recessed elongated groove.

21. (Amended) The three dimensional air cushion as claimed in claim 3, wherein the upper surface layer and the lower surface layer are provided with at least one recessed elongated groove.

22. (Amended) The three dimensional air cushion as claimed in claim 19, wherein said

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elongated recessed grooves provided in said upper surface layer and lower surface layer are connected with each other.

23. (Amended) The three dimensional air cushion as claimed in claim 20, wherein said elongated recessed grooves provided in said upper surface layer and lower surface layer are connected with each other.

24. (Amended) The three dimensional air cushion as claimed in claim 21, wherein said elongated recessed grooves provided in said upper surface layer and lower surface layer are connected with each other.

25. The three dimensional air cushion as claimed in claim 1, wherein said air cushion is a component in one of a shoe, a sneaker, a protective pad, and a helmet, for providing a buffer and shock-absorbing effect.

26. The three dimensional air cushion as claimed in claim 2, wherein said air cushion is a component in one of a shoe, a sneaker, a protective pad, and a helmet, for providing a buffer and shock-absorbing effect.

27. The three dimensional air cushion as claimed in claim 3, wherein said air cushion is a component in one of a shoe, a sneaker, a protective pad, and a helmet, for providing a buffer and shock-absorbing effect.

28. The three dimensional air cushion as claimed in claim 1, further including an inlet for filling fluid.

29. The three dimensional air cushion as claimed in claim 2, further including an inlet for filling fluid.

30. The three dimensional air cushion as claimed in claim 3, further including an inlet for filling fluid.

31. The three dimensional air cushion as claimed in claim 28, further including a valve device.

32. The three dimensional air cushion as claimed in claim 29, further including a valve device.

33. The three dimensional air cushion as claimed in claim 30, further including a valve device.

34. The three dimensional air cushion as claim in claim 28, further including a pump device.

35. The three dimensional air cushion as claim in claim 29, further including a pump device.

36. The three dimensional air cushion as claim in claim 30, further including a pump device.

37. The three dimensional air cushion as claims 28, wherein said air chamber is filled with a liquid fluid.

38. The three dimensional air cushion as claims 29, wherein said air chamber is filled with a liquid fluid.

39. The three dimensional air cushion as claims 30, wherein said air chambers are filled with a liquid fluid.

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40. The three dimensional air cushion as claimed in claim 28, wherein said air chamber is filled with semi-liquid fluid.

41. The three dimensional air cushion as claimed in claim 29, wherein said air chamber is filled with semi-liquid fluid.

42. The three dimensional air cushion as claimed in claim 30, wherein said air chambers are filled with semi-liquid fluid.

43. The three dimensional air cushion as claimed in claim 28, wherein said air chamber is filled with foam material.

44. The three dimensional air cushion as claimed in claim 29, wherein said air chamber is filled with foam material.

45. The three dimensional air cushion as claimed in claim 30, wherein said air chambers are filled with foam material.

46. The three dimensional air cushion as claimed in claim 28, wherein said air chamber is filled with a gas other than air.

47. The three dimensional air cushion as claimed in claim 29, wherein said air chamber is filled with a gas other than air.

48. The three dimensional air cushion as claimed in claim 30, wherein said air chambers are filled with a gas other than air.

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## ABSTRACT OF THE DISCLOSURE

A three dimensional air cushion having a sealed outer peripheral edge of a geometric shape. The projected area of the hollow interior sealed by the outer peripheral edge is smaller than the upper surface area of the air cushion. Air chambers are provided in an upper surface and a lower surface of the cushion, giving excellent buffering function. Two opposite sides of the cushion have a level higher than an intermediate portion to force an object it protects, or a shock source, to move to the center, with the shock energy converted into side support energy, thus obtaining great stability.

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FIG. 1  
(PRIOR ART)

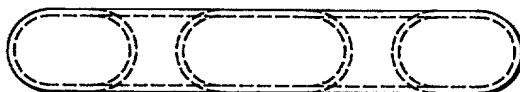


FIG. 2  
(PRIOR ART)

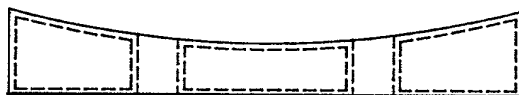


FIG. 3

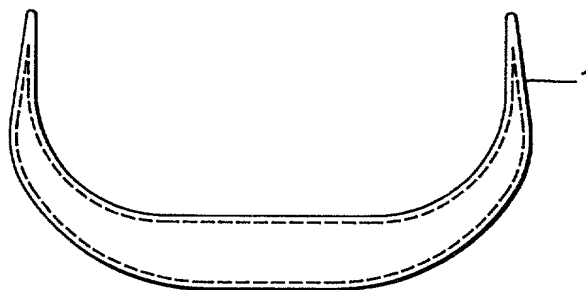


FIG. 4

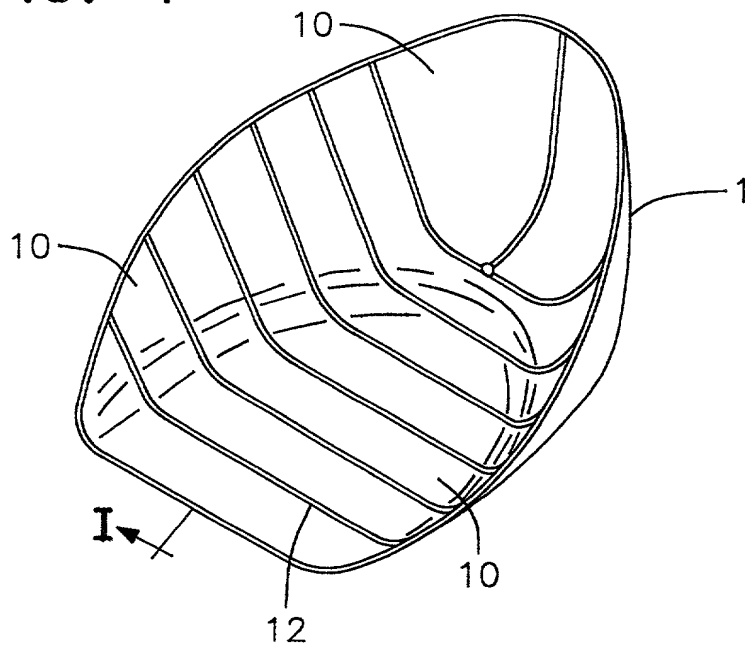


FIG. 5

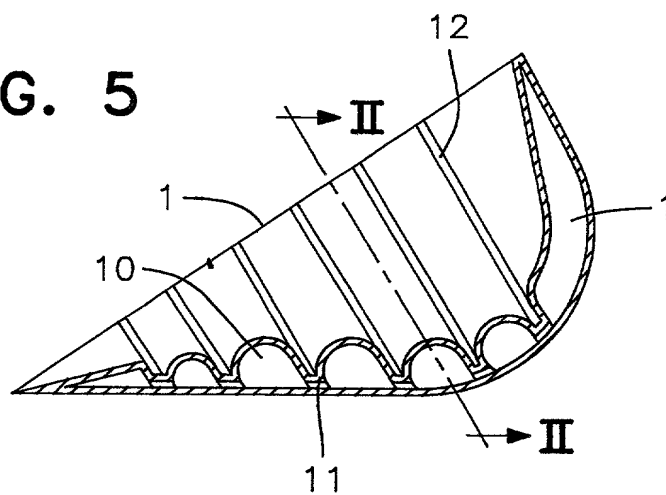


FIG. 6

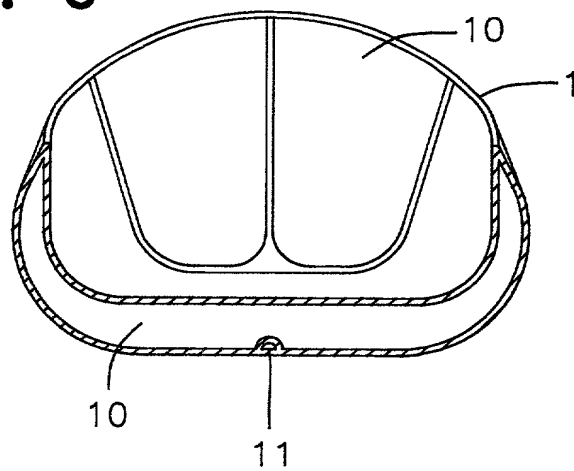


FIG. 4a

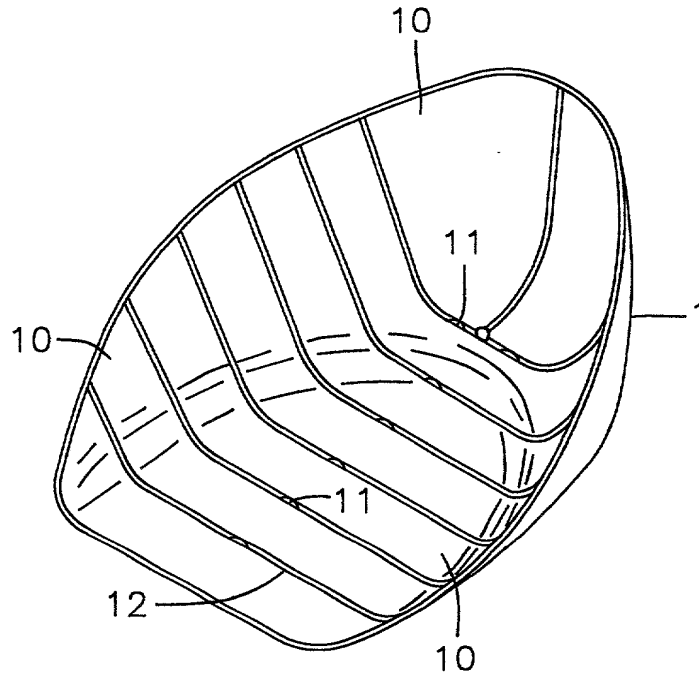


FIG. 19

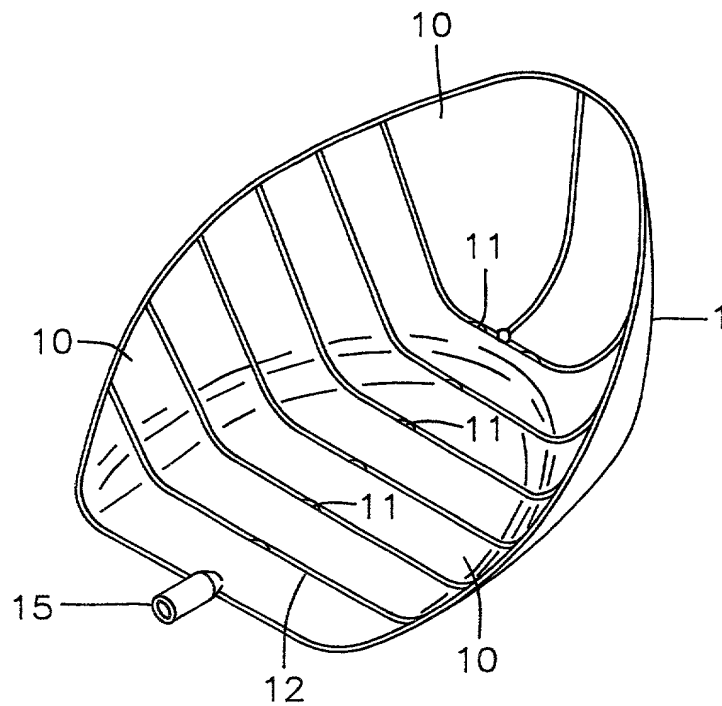


FIG. 7

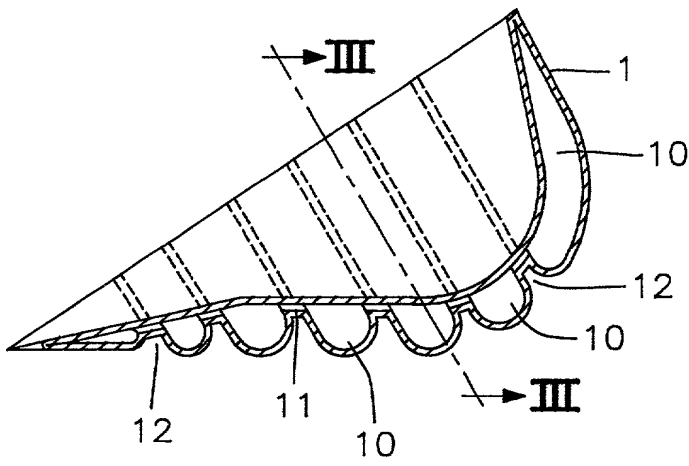


FIG. 8

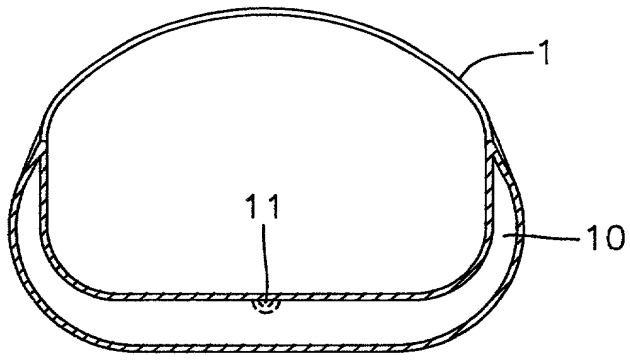


FIG. 9

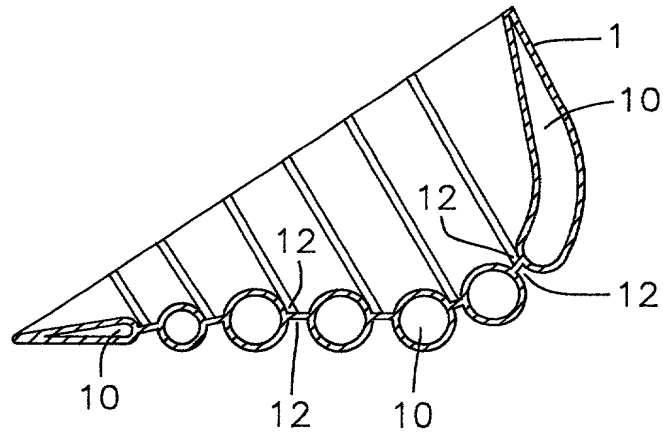


FIG. 10

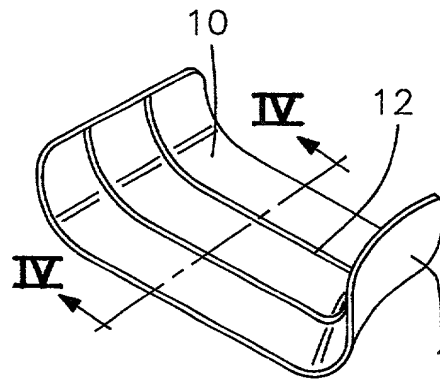


FIG. 11

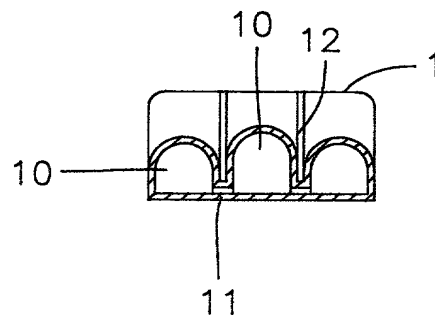


FIG. 12

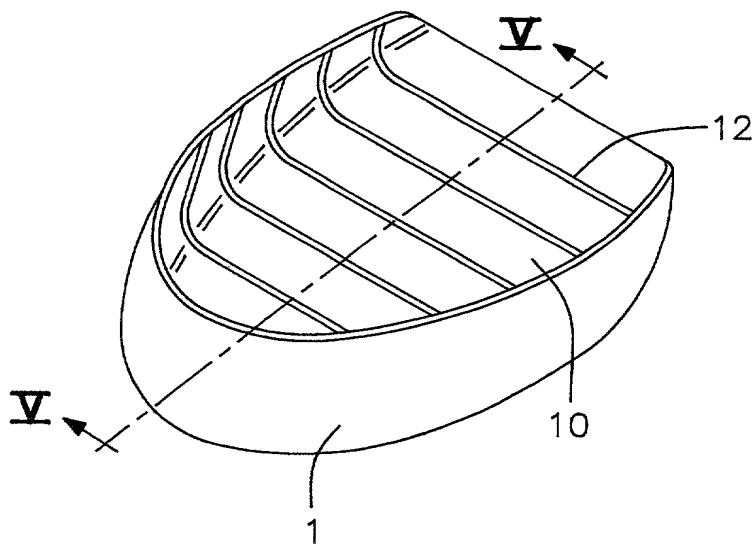


FIG. 13

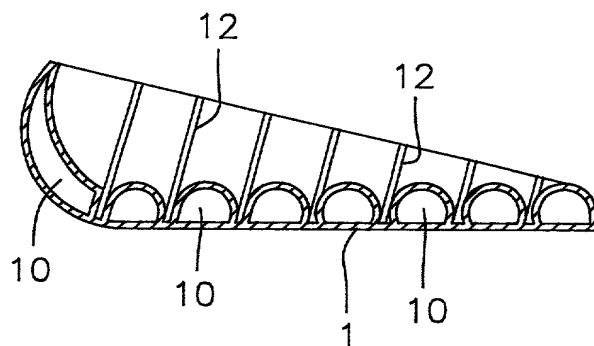


FIG. 14

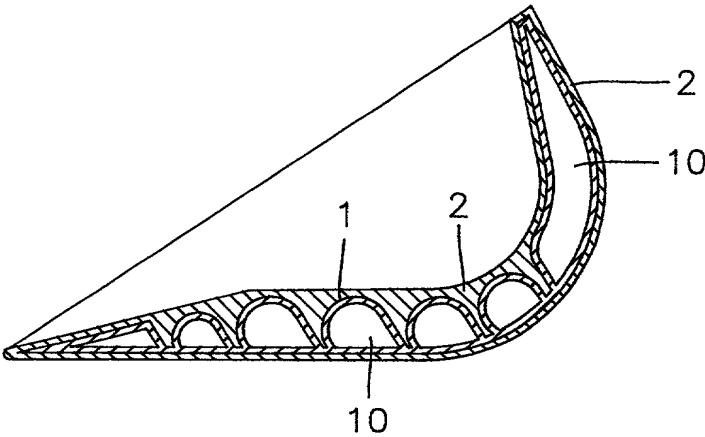
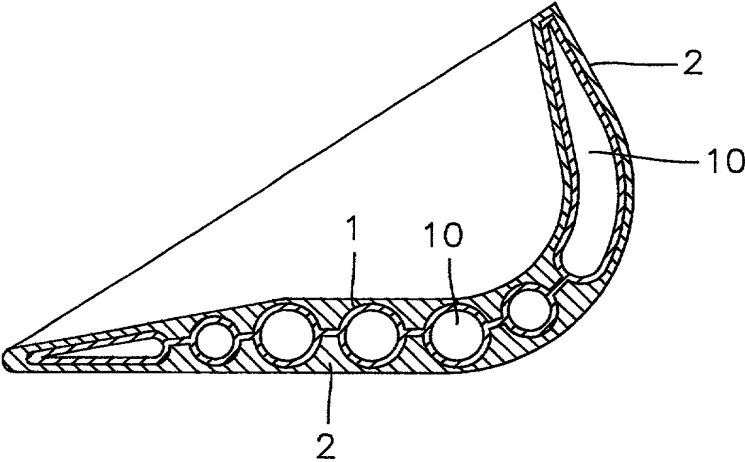


FIG. 15



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FIG. 16

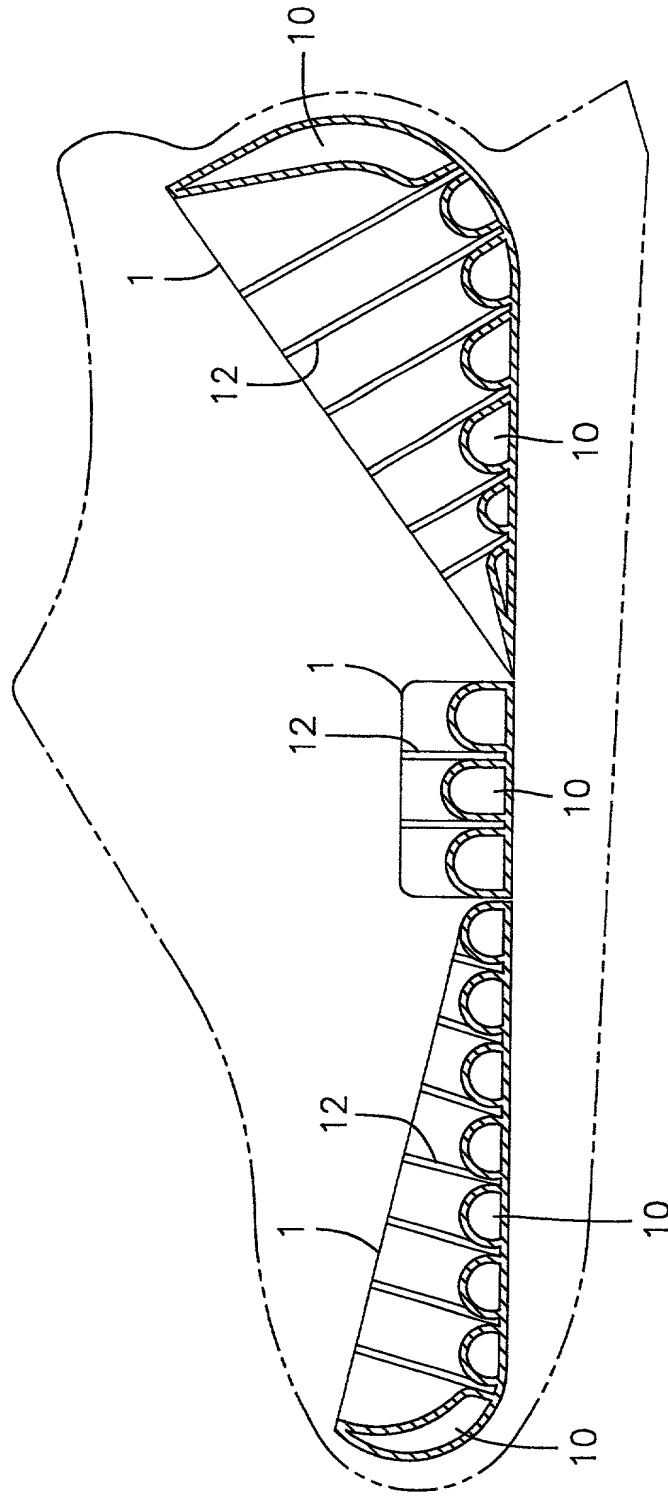




FIG. 17

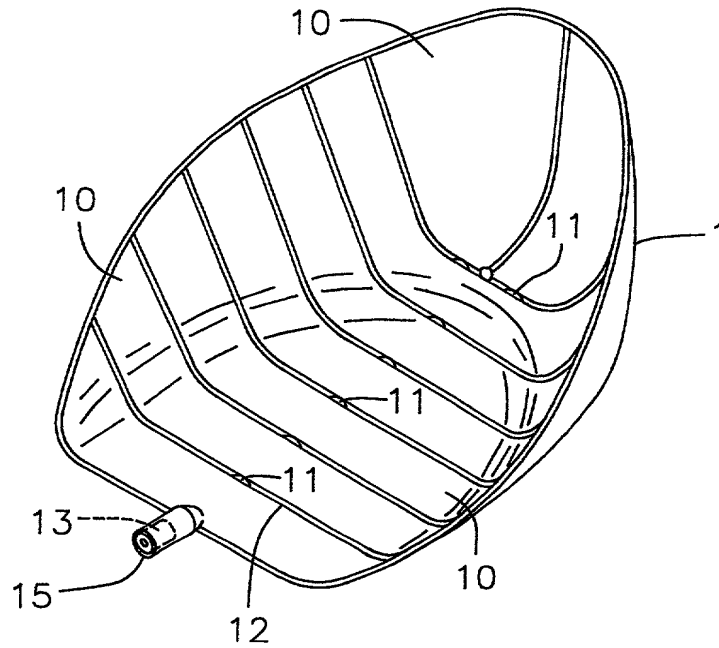
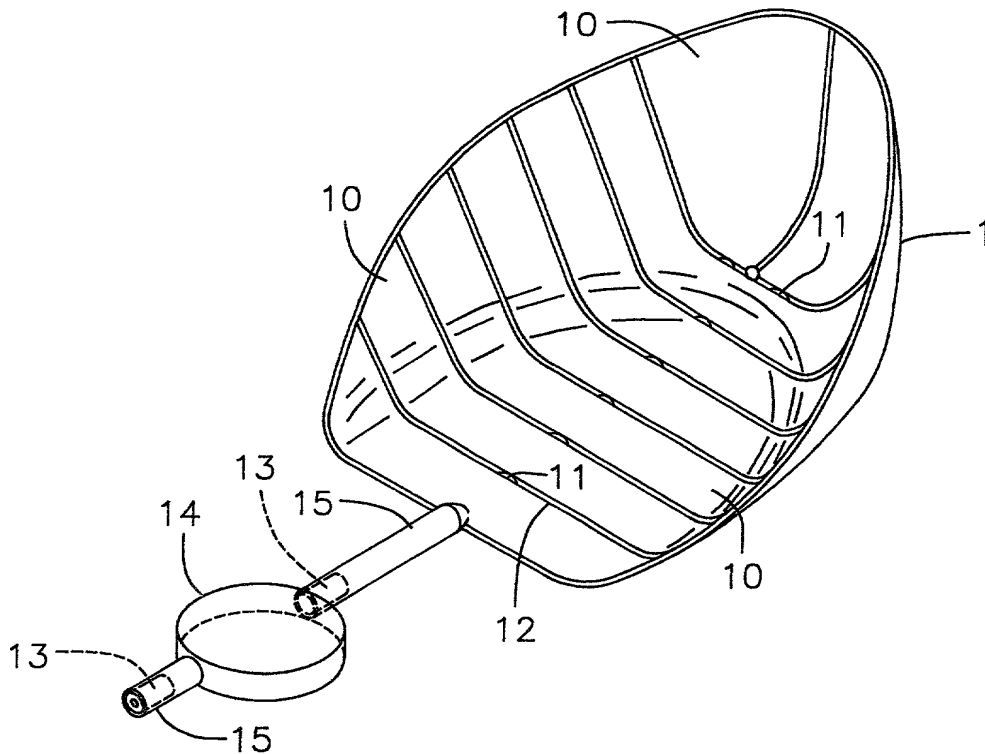


FIG. 18



DECLARATION  
AND POWER OF ATTORNEY  
U.S.A.

ALL PATENTS, INCLUDING DESIGN  
FOR APPLICATION BASED ON PCT; PARIS CONVENTION;  
NON PRIORITY; OR PROVISIONAL APPLICATIONS

FOR ATTORNEYS' USE ONLY

ATTORNEYS' DOCKET NO.

P60998US0

As a below named inventor, I declare that my residence, post office address and citizenship are stated below next to my name, the information given herein is true, that I believe that I am the original, first and sole inventor (if only one name is listed at 201 below), or an original, first and joint inventor (if plural inventors are named below at 201-203, or on additional sheets attached hereto) of the subject matter which is claimed and for which patent is sought on the invention entitled:

AIR CUSION

which is described and claimed in:

☒ the attached specification

☐ PCT International Application No. \_\_\_\_\_

filed \_\_\_\_\_

☐ the specification in application Serial No. \_\_\_\_\_

filed \_\_\_\_\_

(if applicable) and amended on \_\_\_\_\_

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

85106635

(Number)

TAIWAN

(Country)

04 June 1997

(Day/Month/Year Filed)

☒

Yes

☐

No

(Number)

(Country)

(Day/Month/Year Filed)

☐

Yes

☐

No

(Number)

(Country)

(Day/Month/Year Filed)

☐

Yes

☐

No

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

Application No. \_\_\_\_\_

Filing Date \_\_\_\_\_

Application No. \_\_\_\_\_

Filing Date \_\_\_\_\_

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

PCT/US97/09742

(Application Serial No.)

June 4, 1997

(Filing Date)

Abandoned

(Status: patented, pending, abandoned)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys (Registration No. ) to prosecute this application, receive and act on instructions from my agent, and transact all business in the Patent and Trademark Office connected therewith. HARVEY B. JACOBSON, JR. (20,851); JOHN CLARKE HOLMAN (22,769); MARVIN R. STERN (20,640); ALLEN S. MELSER (27,215); MICHAEL R. SLOBASKY (26,421); JONATHAN L. SCHERER (29,851); IRWIN M. AISENBERG (19,007); WILLIAM E. PLAYER (31,409); YOON S. HAM (45,307) and NATHANIEL A. HUMPHRIES (22,772)

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\*Inventor(s) name must include at least one unabbreviated first or middle name.

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				ZIP CODE
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	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY
				ZIP CODE
203	FULL NAME * OF INVENTOR	FAMILY NAME	GIVEN NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY
				ZIP CODE

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under section 1001 of Title 18 of the United States Code; and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201*	SIGNATURE OF INVENTOR 202*	SIGNATURE OF INVENTOR 203*
Ing-Jing Huang		
DATE	DATE	DATE
July 5, 2000		

☐ Additional inventors are named on separately numbered sheets attached hereto.